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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,994

06/16/2006

Masashi Sato

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ALEXANDRIA, VA 22320-4850

EXAMINER

KOLLIAS, ALEXANDER C

ART UNIT

PAPER NUMBER

1796

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,994	Applicant(s) SATO ET AL.	
	Examiner ALEXANDER C. KOLLIAS	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20090427, 20080905, 20060616</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The use of the trademarks NOVATEC HD HY331, and DFDJ7540 has been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (US 2003/0207979) in view of Lewin (US 2002/0013393).

Regarding claim 1, Sato et al discloses a flame retardant resin composition comprising 30 to 90 parts by weight polyethylene having a melt flow rate of less than 5 g/10 min and a density of at least 0.30 g/cm³ (disclosed component a), about 5 to 65 parts by weight of an olefin type polymer containing intra molecular oxygen atoms such as (component b1), 5 to 40 parts by mass of least one polymer such as acid modified olefin polymer, acid modified styrene thermoplastic, acid modified polyethylene, etc (components c1-c4) and 30 to 250 parts by mass of a metal hydroxide such as aluminum or magnesium hydroxides (Page 1 [0024]-[0028], Page 2 [0029]-[0034], Page 4 [0107]-[0110]). It is noted that the amount of metal hydroxide or hydrate disclosed by the reference is identical to that recited in claim 1. Further, it is noted that the density and melt flow rate of the polyethylene are within the ranges of 5 g/10 min or less and 0.90 g/cm³ or more presently recited in claim 1. Given that the reference discloses that acid modified styrene, the condition that at least one polymer (B) is modified by acid recited in claim 1 is met. Polyethylene comprises 30 to 90 parts by mass in the total of 100 parts by mass (30 to 90 wt %) while the acid modified styrene comprises 10 to 40 parts by mass in the total of 100 parts by mass (10 to 40 wt %) comprising components (a) (b1) and (c) (Page 3 [0093] and Page 4

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[0105]). Given that the reference discloses acid modified styrene it is clear that the disclosed resins meet the proviso that compositions comprises at least one resin modified by acid. It is noted that the amounts of the resin are with the range of 30 to 90 wt % of polyethylene and 70 to 10 wt % of resin (B) recited in claim 1. The reference that the composition is cross-linked (Page 2 [0035]). Given that the reference does not disclose halogenated compounds added to the composition, it is clear that the coating composition is non-halogenated. Additionally, Sato teaches that the composition comprises fire retardant adjuvants such as zinc borate (Page 4 [0111]).

With respect to claim1, while Sato does disclose a zinc compound that meets the claimed limitation in that respect, there is no mention of the amount of zinc compound which is a requirement in claim 1. Furthermore, with respect to the other cited claims, Sato discloses neither the specific zinc compound nor its amount as required by said claims.

Lewin discloses a polymeric flame retardant composition comprising metal-based catalysts such as zinc borate which is the zinc compound taught by Sato. Lewin teaches that zinc borate is added in the amount from 0.0 to 20 wt % of the composition which overlaps the claimed range of zinc compound on a weight percent basis, i.e., 0.76 wt % to 5.4 wt % in the present claims (Page 2 [0018]). The reference discloses that the addition of zinc borate to the composition results in increased fire retardancy as evidenced by increase in OI values as well as increased UL 94 rating (Page 2 [0018]).

Given that both Sato and Lewin are drawn to fire retardant compositions comprising polymers and zinc compound, in light of the particular advantages provided by the use and control of the amount of zinc compound as taught by Lewin, it would therefore have been

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obvious to one of ordinary skill in the art to include such compounds in the composition disclosed by Sato with a reasonable expectation of success.

Regarding claim 2, modified Sato teaches all the claim limitations as set forth above. However, Sato does not disclose that the composition comprises zinc sulfide.

Lewin discloses a polymeric flame retardant composition comprising sulfur compounds such as zinc sulfide which are added to the compositions in amounts of 1-3 wt % in order to obtain a pronounced flame retardancy (Page 1 [0009]-[0010], Page 2 [0011]). At combustion zinc sulfide is oxidized to higher valency products and interact with the polymer to render a flame-retarding surface barrier (Page 2 [0011]). It is noted that the amounts of 1 to 3 wt % zinc sulfide in within the amounts of zinc compound, on a weight percent basis, i.e. 0.76 to 5.40 wt % of a zinc compound, recited in claims 1 and 2.

Given that both Sato and Lewin are drawn to fire retardant polymeric compositions, in light of the particular advantages provided by the use and control of zinc sulfide and amounts thereof as taught by Lewin, it would therefore have been obvious to one of ordinary skill in the art to include such compounds in the composition disclosed by Sato with a reasonable expectation of success

Regarding claims 3 and 6, modified Sato teaches all the claim limitations as set forth above. Additionally, Sato discloses that the coating composition may be used to coating electric cables (Page 4, [0114]). Thus, it is clear that the resin composition is utilized to coat a conductor or wire.

Regarding claims 4 and 7, modified Sato teaches all the claim limitations as set forth above. Additionally, Sato discloses that the composition is cross-linked by electron beam radiation (Page 2 [0035]).

6. Claims 5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (US 2003/0207979) in view of Lewin (US 2002/0013393) as applied to claims 1-4 and 6-7 above and further in view of Nakamura et al (US 2003/0207106).

Regarding claims 5 and 8-9, modified Sato teaches all the claim limitations as set forth above. However, the reference does not disclose a wiring harness comprising a single wire bundle and a wiring harness protective material for covering the wire bundle comprising vinyl chloride as the base material.

Nakamura et al discloses a wire harness material comprising a substrate made of non-halogen based resin and a wire bundle comprising wires coated with a non-halogen based resin or a bundle comprising a mixture of non-halogen coated and polyvinyl chloride coated wires (Page 3 [0040]). The wire harness comprises a tape base painted with adhesive which prevents plasticizers and adhesive adjuvants from migrating; thereby the wire harness obtains a stable and durable cable quality (Page 3 [0040]).

Given that both Sato and Nakamura et al are drawn to non-halogenated coatings for wires, in light of the particular advantages provided by the use and control of the wire harness and cable bundles as taught by Nakamura et al, it would therefore have been obvious to one of

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ordinary skill in the art to include such wire harnesses and wire bundles comprising the coating disclosed by Sato with a reasonable expectation of success.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-8 of copending Application No.

11/918,605 (published as US PGPub 2009/0057009). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons given below.

Claims 1-8 of copending Application No. 11/918,605 recite a non-halogenated insulated wire and a wire harness comprising the insulated wire, wherein the inner coating comprises a

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polyethylene have a melt flow rate of 5 g/10 min or less and a density of 0.9 g/cm³ or more, at least one polymer (B) selected from an α -olefin (co)polymer, an ethylene vinyl ester copolymer, an ethylene- α , β -unsaturated carboxylic acid alkyl ester copolymer, and a styrene thermoplastic elastomer, a metallic hydrate which comprises 30 to 250 parts by weight a zinc compound such as zinc sulfide which comprises 1 to 20 parts by weight. The polyethylene comprises 30 to 90 wt % and the second polymer, (B) comprises 70 to 10 wt % of the total polymer with the conditions that at least one of (B) is modified by acid and/or (E) an organic functional coupling agent is included in the composition in amounts from 0.3 to 10 parts by weight. Additionally, the claims recite that the coating may be cross-linked. While the copending application does not claim that the method of cross-linking the coating and the polymeric compositions of the harness, note that Page 20 Paragraph [0070] of the Specification states that the coating composition may be cross-linked by radiation, peroxide, and a silane cross-linking agent while Page 22 Paragraphs [0071]-[0072] of the Specification discloses that the wire harness comprises vinyl chloride resin, and a bundle of wires coating with the non-halogen containing coating composition. Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

9. Claims 1-9 are directed to an invention not patentably distinct from claims 1-8 of commonly assigned application 11/918,605. Specifically, see the discussion set forth above in Paragraph 8.

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The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned application, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER C. KOLLIAS whose telephone number is (571)-270-3869. The examiner can normally be reached on Monday-Friday, 8:00 AM -5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C. K./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796